

3.0 EXTERNAL FACTORS

External factors such as development activity, new roadway construction, incorporations, and annexations influence the population, traffic volumes, and the road miles within unincorporated King County. Changes in population, traffic volumes, and road miles in turn affect the frequency of collisions by increasing or decreasing exposure.²

It is necessary to account for these external factors when comparing 2003 collisions with data from previous years. To allow direct comparison, the data is “normalized” using population and annual miles driven. Table 1 provides a comparison of these factors for 2003, 2002 and 1994.

TABLE 1 POPULATION, ROAD MILES, & TRAFFIC VOLUMES			
Category	2003	2002	1994
Population ¹	351,843	351,700	507,226
Land Area (square miles) ²	1,751	1,752	1,830
Road Miles Maintained ³	1,883	1,895	2,361
Average Daily Traffic Volumes on Principal Arterials ³	13,231	13,441	11,717
Annual Miles Driven (million miles) ³	2,244	2,295	3,273
<i>Data Sources:</i>			
1. King County Office of Budget - 2002 Annual Growth Report; and the State of Washington Office of Financial Management			
2. King County Office of Budget			
3. See Table C3 (Appendix C)			

As indicated in Table 1, unincorporated King County’s population, land area, maintained road miles, and annual miles driven have decreased over the past 10 years. Land area has decreased by 4%, while population, road miles, and miles driven have decreased by 20% to 35%. These changes suggest that annexations and incorporations, which decrease road miles and miles driven, have a greater influence than development and new road construction, which tend to increase them. Annexations and incorporations have also decreased the percentage of road miles in urban areas, and therefore affect the character of King County’s road system.

Traffic volumes on principal arterials have increased 13% over the past 10 years. This result is expected since principal arterials are used by motorists throughout the region, and therefore are affected by regional growth. The increase in volume on these roadways is of concern due to their importance to regional mobility.

² The term exposure refers to the risk of collisions due to the presence of vehicles on the road. Exposure increases as the number of vehicles on a roadway and the length of a roadway increases. For example, given two similar roadways with different lengths, more collisions would be expected to occur on the longer roadway.